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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,206	12/15/2003	Seok Il Chang	P-0616	4800

34610 7590 02/22/2007  
FLESHNER & KIM, LLP  
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CHANTILLY, VA 20153

EXAMINER
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AGHDAM, FRESHTEH N

ART UNIT	PAPER NUMBER
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2611

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/22/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/734,206

Applicant(s)

CHANG, SEOK IL

Examiner

Freshteh N. Aghdam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 10-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4-9 is/are allowed.
- 6) ☒ Claim(s) 1,2 and 10-14 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-2 are rejected under 35 U.S.C. 112, first paragraph, because the claims recite single means without combining with another recited element of means.

#### **2164.08(a) Single Means Claim:**

A single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. In re Hyatt, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983) (A single means claim which covered every conceivable means for achieving the stated purpose was held nonenabling for the scope of the claim because the specification disclosed at most only those means known to the inventor.). When claims depend on a recited property, a fact situation comparable to Hyatt is possible, where the claim covers every conceivable structure (means) for achieving the stated property (result) while the specification discloses at most only those known to the inventor.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 10-12 are rejected as being under 35 U.S.C. 101 because: the claimed invention is directed to a non-statutory subject matter because as a whole it does not accomplish a practical application. In order to accomplish a practical application, it must produce a: useful, concrete and tangible result." (Interim Guidelines for Examination of

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Patent Applications for Patent Subject Matter Eligibility, pages 21-22) In other words, the tangible requirement does require that the claim must recite more than a 101 judicial exception. It is for the discovery or invention of some practical method or means of producing a beneficial result or effect, that a patent is granted see Corning, 56 U.S. (15 How.) at 268, 14 L.Ed. 683. Claim 10 recites a method, however, there is no tangible result disclosed for this method. Claims 11-12 are dependent on the independent claim 10; therefore, they are also rejected under 35 U.S.C. 101.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Onggosanusi et al (US 2003/0210750), further in view of Chennakeshu et al (US 6,031,874) and Rice (US 2002/0172260).

As to claims 1-2, Onggosanusi discloses a communication system (base station or mobile station (Par. 20) comprising mapping and spreading data symbols (Fig. 2a, symbol mapping and spreader) when a quadrature phase shift keying modulation is performed (Par. 23) in a communication system utilizing time division duplexing (i.e. TDD, Par. 3). Onggosanusi is not explicit about the mapping and spreading of the symbols is performed by using binary operations. One of ordinary skill in the art would

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recognize that it is well known in the art to implement mapping by using binary operations as it is evidenced by Chennakeshu (Col. 2, Lines 29-40). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Chennakeshu with Onggosanusi to implement bit to symbol mapping in order to reduce hardware complexity. One of ordinary skill in the art would recognize that it is well known in the art to perform spreading using binary operations as it is evidenced by Rice (Abstract; Fig. 2; Par. 62-65). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Rice with Onggosanusi to implement bit to symbol mapping in order to reduce hardware complexity.

As to claim 13, Onggosanusi discloses a communication system (base station or mobile station (Par. 20) comprising mapping an spreading data symbols (Fig. 2a, symbol mapping and spreader). Onggosanusi is not explicit about the mapping and spreading of the symbols is performed by using binary operations. One of ordinary skill in the art would recognize that it is well known in the art to implement mapping by using binary operations as it is evidenced by Chennakeshu (Col. 2, Lines 29-40). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Chennakeshu with Onggosanusi to implement bit to symbol mapping in order to reduce hardware complexity. One of ordinary skill in the art would recognize that it is well known in the art to perform spreading using binary operations as it is evidenced by Rice (Abstract; Fig. 2; Par. 62-65). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teaching of Rice with Onggosanusi to implement bit to symbol mapping in order to reduce hardware complexity.

***Allowable Subject Matter***

Claims 4-9 are allowed. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Maruyama (US 5,724,382) see columns 1 and 3; McClellan (US 2004/0008737) see paragraphs 60-61; and Dodge (US 2002/0122464) see paragraphs 24 and 32.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Freshteh N. Aghdam whose telephone number is (571) 272-6037. The examiner can normally be reached on Monday through Friday 9:00-5:30 pm.

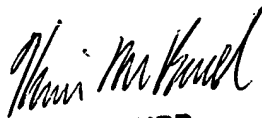
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Freshteh Aghdam  
Examiner  
Art Unit 2611

February 15, 2007

  
**KEVIN BURD**  
**PRIMARY EXAMINER**